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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/691,503

10/24/2003

Yasuaki Kuwata

117604

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25944 7590 01/11/2007  
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EXAMINER

NGUYEN, PHILLIP

ART UNIT

PAPER NUMBER

2828

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/691,503

Applicant(s)

KUWATA, YASUAKI

Examiner

Phillip Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 14, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 14 and 17 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Acknowledgement*

1. Claims 1, 3, and 14 are amended. Claims 7 and 18 are cancelled.

### *Response to Arguments*

2. Applicant's arguments with respect to claims 1-6, 14, and 17 have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-5 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Koyama et al. (US 20020141472).

With respect to claim 1, Koyama discloses in Fig. 2 a surface emitting semiconductor laser, comprising: a laminate of semiconductor layers (10-26) emitting multimode laser light; and a block member blocking light of at least a fundamental mode among the multimode laser

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light emitted from the laminate the block member being provided separate from an electrode provided on a top of the laminate (paragraph 0024).

With respect to claim 2, Koyama discloses the laminate semiconductor layers comprising a substrate 10, a lower mirror 12 on the substrate, an upper mirror 22, an active region (between the lower and upper mirrors), and a current confinement layer 32, the active region and the current confinement layer being interposed between the upper and lower reflection mirrors; and the block member is provided in an emission aperture provided above the upper reflection mirror (also see paragraph 0024).

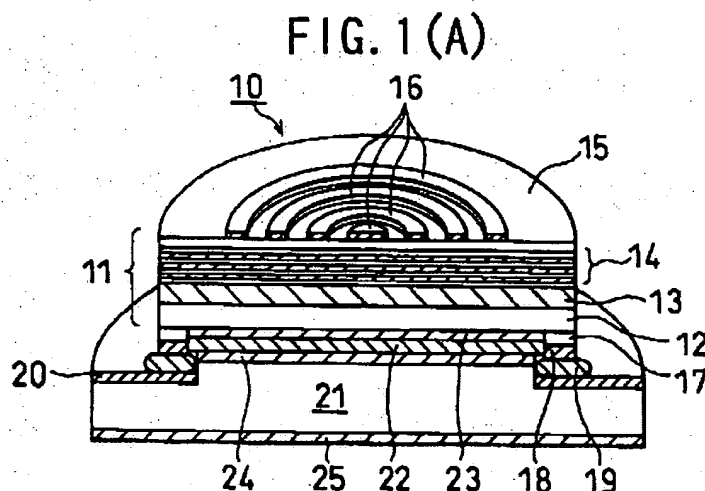
With respect to claim 3, see Fig. 2F-2H for the central portion on top of the mirror 22.

With respect to claim 4, Koyama discloses the laminate has a mesa which is formed by mirror 18 and layer 26, and an emission aperture is formed on the mesa; and the emission aperture and the block member have shapes related to outer shape of the mesa.

With respect to claim 5, Koyama further discloses the laminate comprising a current confinement layer 32 having a conductive region 34; and the block member has a size smaller than that of the conductive region 32.

With respect to claim 14, Koyama discloses the claimed invention as shown in the rejection of claim 1 and further teaching about using the laser in a communication system with an optical fiber optically connected to the VCSEL (paragraphs 0006, 0009, 0011, and throughout the specification).

4. Claims 1, 3, 6, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Simizu (US Patent 6480516).



With respect to claim 1, Simizu discloses in Fig. 1 a surface emitting semiconductor laser, comprising: a laminate of semiconductor layers (11-25) emitting multimode laser light; and a block member (dish-shaped electrode at the center) blocking light of at least a fundamental mode among the multimode laser light emitted from the laminate the block member being provided separate from an electrode (ring shaped-electrode around the central portion) on a top of the laminate.

With respect to claim 3, Simizu discloses the laminate is partially covered with the electrode 16 so that the emission aperture can be defined; and the block member is provided on the top of the center of the emission aperture.

With respect to claim 6, Simizu discloses the material of the blocking member is the same as that of the electrode.

With respect to claim 17, it is inherent that the electrode is made of metal. Therefore the block member is made of metal.

*Allowable Subject Matter*

5. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Conclusion*

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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***Communication Information***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**MINSUN OH HARVEY  
PRIMARY EXAMINER**